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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,553	12/05/2003	Kyung-Su Chae	041993-5350	7982

9629 7590 04/28/2005

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EXAMINER

TRAN, KHOI H

ART UNIT	PAPER NUMBER
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3651

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/727,553	Applicant(s) CHAE ET AL.	
	Examiner Khoi H Tran	Art Unit 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

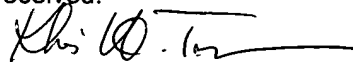
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


KHOI H. TRAN
PRIMARY EXAMINER

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-6, 8, and 9 in the reply filed on 04/04/2005 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the entire claimed substrate transfer system must be shown or the features canceled from the claims 1-6, 8, and 9. The original drawings lack the auto-guided vehicle having a robot arm, the barcode reader on the arm, the moving path unit including a rail, the position detecting sensor, and the cassette stocker having barcode reader. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poinelli 5,163, 802 in view of Iwasaki et al. 6,129,496.

Poinelli '802 discloses an auto-guided vehicle (AGV) having a barcode reader 19 for transferring substrate cassette based on the read information from the cassette barcode. However, Poinelli '802 is silent as to the specifics of the cassette stocker and the moving path system.

Iwasaki '496 discloses a substrate processing system. Iwasaki '496 shows the utilization of stockers for storing substrate cassettes and moving path system for guiding AGV 's are commonly well known within the substrate manufacturing and transporting environment.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Poinelli '802 with the commonly well known

stocker and moving path system because they facilitate the storing of substrate cassettes and provide guidance for the AGV, as shown by Iwasaki '496.

5. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pionelli 5,163,802 in view of Iwasaki et al. 6,129,496 as applied to claim 1 above, and further in view of Murata et al. 6,019,563.

Pionelli '802 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of a rail.

Murata '563 discloses an AGV for transferring cassettes. Murata '563 teaches that it is commonly well known to provide rail for guiding automated vehicle.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided a rail system to Pionelli '802 modified system because it facilitates the commonly well known guidance means for the AGV, as shown by Murata '563.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pionelli 5,163,802 in view of Iwasaki et al. 6,129,496 as applied to claim 1 above, and further in view of Markin et al. 5,510,984.

Pionelli '802 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of the position sensor to detect a position of the AGV.

Markin '984 discloses a guidance and tracking system for AGV 's. Markin '984 teaches that it is commonly well known to provide sensors for detecting the position of the AGV's for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided the commonly well known detecting sensors to Iwasaki '496 modified system because they facilitate the tracking of mobile AGV 's, as taught by Markin '984.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Bonora et al. 5,570,990, or in view of Poinelli 5,163, 802.

Iwasaki '496 discloses a substrate transfer system. The system comprises a cassette having a bar code. The system comprises a cassette stocker having a barcode reader for detecting a processed cassette. The system comprises an auto-guided vehicle (AGV) being able to transfer the cassette via a robot arm. The system comprises a plurality of process stages at which processes are conducted on a substrate. The system comprises a host to automatically control the cassette stoker, the auto guided vehicle, and the process stages. However, Iwasaki '496 is silent as to the specific of the robot arm having a barcode reader.

Bonora '990 discloses of an AGV having a robot arm with a communication means 239 located thereon for reading a code on the cassette wafer for tracking purposes, when the cassette is being manipulated by the AGV.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Iwasaki '496 robot arm with a reader for reading the barcode on the cassette, as taught by Bonora '990, because it facilitates the tracking of the cassette, while it is being handled by the AGV.

Pionelli '802 discloses of an AGV having a robot arm with a barcode reader located thereon for reading a code on the cassette wafer for verifying purposes, when the cassette is being manipulated by the AGV.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Iwasaki '496 robot arm with a reader for reading the barcode on the cassette, as taught by Pionelli '802, because it facilitates the verification of the cassette, while it is being handled by the AGV.

8. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Poinelli 5,163, 802 or in view of Bonora et al. 5,570,990 as applied to claim 1 above, and further in view of Murata et al. 6,019,563.

Iwasaki'496 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of a rail.

Murata '563 discloses an AGV for transferring cassettes. Murata '563 teaches that it is commonly well known to provide rail for guiding automated vehicle.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided a rail system to Iwasaki '496 modified system because it facilitates the commonly well known guidance means for the AGV, as shown by Murata '563.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Poinelli 5,163, 802 or in view of Bonora et al. 5,570,990 as applied to claim 1 above, and further in view of Markin et al. 5,510,984

Iwasaki'496 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of the position sensor to detect a position of the AGV.

Markin '984 discloses a guidance and tracking system for AGV 's. Markin '984 teaches that it is commonly well known to provide sensors for detecting the position of the AGV's for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided the commonly well known detecting sensors to Iwasaki '496 modified system because they facilitate the tracking of mobile AGV 's, as taught by Markin '984.

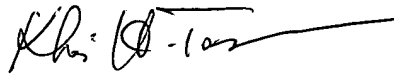
Conclusion

10. Additional references made of record and not relied upon are considered to be of interest to applicant's disclosure: see attached USPTO Form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H Tran whose telephone number is (571) 272-6919. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khoi H Tran
Primary Examiner
Art Unit 3651

KHT
04/26/2005